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ABSTRACT

Students' achievement in school is undoubtedly multi-faceted. Research has suggested that one important variable in student achievement is the interaction between the teacher and the student. Such interactions may serve to enhance or diminish the achievement of an individual student or group of students. Results of anonymous questionnaires given to 80 fifth grade and sixth graders are reported along with data obtained from teacher ratings of each student's abilities. On the basis of the teacher ratings, high and low expectancy groups were created. Responses to items asking for student perceptions of classroom interactions in general showed no significant differences between the two expectancy groups. These data suggest that the investigation of student perceptions of differential treatment by teachers of those expected to do well and poorly is not as informative as previous research suggests it should be. Other findings are also discussed along with the implication of the research for future work in this area. (Author/GK)

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Student's Perceptions of Differential Treatment in the Classroom

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Student's Perceptions of Differential Treatment in the Classroom

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Abstract

Students' achievement in school is undoubtedly multi-faceted. No cause can possibly be designated as the single underlying reason for high or low academic performance. Research has suggested that one important variable in student achievement is the interaction between the teacher and the student. Such interactions may serve to enhance or diminish the achievement of an individual student or group of students. Negative teacher-student interactions may set up a negative self-fulfilling prophecy in which students expected to perform poorly and in fact do so.

Cooper (1979) has proposed a model for the operation of such a self-fulfilling prophecy in which he designates clasroom climate and teacher feedback as major mediators of this effect. Rosenthal (1974) also suggests that classroom climate and teacher feedback are important as well as teacher input and the opportunity for student output. The present study attempts to assess these factors through a series of open-ended questions directed at intermediate grade students. Other questions, also based on work by Cooper (1979) which cites the importance of the student's perception of the covariation of his or her effort and school outcomes, asked about the students perceptions of their efforts and the importance of school success.

Results of anonymous questionnnaires given to 80 fifth grade and sixth graders are reported along with data obtained from teacher ratings of each student's abilities (used as a teacher expectancy measure). On the basis of the teacher ratings, high and low expectancy groups were created. Responses to items asking for student perceptions of classroom interactions in general showed no significant differences between the two expectancy groups. These data suggest that the investigation of student perceptions of differential treatment by teachers of those expected to do well and poorly is not a informative as previous research suggests it should be. Other findings are also discussed along with the implications of the research for future work in this area.

Student's Perceptions of Differential Treatment in the Classroom

Student's achievement in school is contingent upon many more factors than their simple innate capability. Parental support and interest, community support, peer relationships, and school environment are all important factors. Since educators have little or no control over most of these variables, they must seek to provide the optimal school enviornment for their students. Most would agree that the teacher is a major component of this school environment and of student achievement (Braun, 1976). The relationship the teacher has with a student may eventually enhance or diminish a student's level of achievement.

While one would hope that all student-teacher interactions would result in positive outcomes, this is not always the case. Some teacher-student interactions do result in diminished levels of student achievement. Although some may argue that these negative occurrences are rare, we feel that if detrimental teacher-student interactions occur at all, we need to understand why and how the effects operate.

This paper will attempt to add to our understanding of detrimental teacher-student interactions, often researched under the label of the self-fulfilling prophecy. Although a good deal of research has demonstrated the effects of negative teacher expectations upon student achievement, much of the work has been based upon direct observations of the teacher's behavior or has looked only at student performance. This study adds to this literature by using qualitative data derived from student perceptions of teacher expectations and behavior.

The Self-Fulfilling Prophecy

The self-fulfilling prophecy has been related to a number of areas of human interaction. It was originally described by Robert K. Merton (1948;p.193) as ". . . a false definition of a situation invoking a new behavior which makes the originally false conception come true." Merton goes on to describe its operation as follows: ". . . public definition of a situation (prophecies or predictions) becomes an integral part of the situation and thus affects subsequent development."(p.195). Peters (1970;p.101) described this effect in slightly different terms. "It's a simple enough equation: Choose a group, discriminate against it, force it by your discrimination to look and act inferior, and then point to the way it looks and acts as proof of its inferiority."

The self fulfilling prophecy has received empirical support in many areas. Rosenthal and Rubin (1978) summarized the results of 345 studies investigating interpersonal expectancy effects in eight catagories: reaction time, inkblot tests, aminal learning, laboratory interviews, psychophysical judgments, learning and ability, person perception, and everyday life situations. They concluded that the reality of the phenomenon of the self-fulfilling prophecy was beyond question. The magnitude of the mean effect size was clearly not trivial, and there are not enough nonsignificant studies to outnumber the studies that did reach significance.

Rosenthal and Jacobson were some of the first researchers who attempted to show that the self-fulfilling prophecy operates in educational settings. They reported their findings in Pygmalion in the Classroom (Rosenthal & Jacobson, 1968). In order to demonstrate the effect, they manipulated teacher expectations by first administering

Flannagan's Test of General Ability (Flannagan, 1960), an IQ test, and then telling the teachers that it was a test designed to identify potential "bloomers". The teachers involved were given the "results" of the test and were instructed to watch these designated students for increases in academic growth, thus creating the expectation that these students would demonstrate improvements in their performance. In actuality, these names of potential "bloomers" were a randomly selected group that comprised approximately 20% of the student population.

At the end of the school year, the TOGA was readministered. The results showed that students who had been falsely named "bloomers" did show a greater increase in academic achievement than the control students.

Rosenthal and Jacobson's study proved to be a quite controversial with researchers both disagreeing and agreeing with the original findings. Those disagreeing with Rosenthal and Jacobson based their criticisms upon faulty methodology (Snow, 1969; Elashoff & Snow, 1970) and inability to replicate their findings (Claiborn, 1969).

Snow (1969) felt that the following methodological problems existed with the original study:

a) Measurement Problems. Rosenthal and Jacobson relied solely upon the TOGA which Snow felt had inadequate norms for young (especially low SES) children.

b) Incomplete data and empty cells.

c) Homoacedasticity assumption (equal variance among groups) was violated.

d) Inadequate analysis. The authors relied upon simple gains and did not show that these gains were not due to simple regression.

Snow, in collaboration with Elashoff (Elashoff & Snow, 1971) presented further arguments against the Rosenthal and Jacobson study and presented them in their book Pygmalion Reconsidered. For a response to these criticisms, see Rosenthal and Rubin (1971).

Claiborn's (1969) work represents another type of criticism--a failure to replicate Rosenthal and Jacobson's original findings, though many of the same procedures were followed. One important difference, however, was that in Claiborn's study, the expectancy manipulation was introduced one month into the second semester of the school year. By that time, the teachers may have already had the opportunity to form their own impressions.

In contrast to those in disagreement with Rosenthal and Jacobson, a number of researcher's were able to replicate their original findings (Meichenbaum, Bowers, & Ross, 1969; Rist, 1970; Seaver, 1973). One of these replications was a study with institutionalized female offenders, in which Meichenbaum et al. found that when certain individuals were designated "late bloomers," and their teachers were made aware of this designation, this group showed improvements in academic performance and classroom behavior that was significantly greater than the control students. It is interesting to note that the six girls chosen as "late bloomers" were the three rated by all teachers as having high ability and the three girls rated by all teachers as having low ability. Meichenbaum et al. reported that the teachers were initially surprised at these last three choices, but easily convinced each other that they had observed behavior that indicated that these last three could in fact be ready for an academic spurt.

In a longitudinal,naturalistic study, Rist (1970) followed one group of children from kindergarten to second grade. At the beginning of their kindergarten year, their teacher grouped them according to ability. The "smarter" group was placed at the table closest to the teacher and the "dullest" group was placed farthest away from the teacher. As a result of differential treatment (attention, level of difficulty of material taught, etc.) the "dull" children remained so and the "smart" children made significant academic progress. Once these different levels of achievement were established in kindergarten, very few children moved into a different group as they progressed through first and second grade. Since the kindergarten teacher established the permanent groups so early in the school year (the eighth day), Rist concluded that much of the teacher's impression of the children's ability rested upon the following information: whether or not the child had any preschool experience, which families of children in the class were on welfare, and their own past experience with older siblings of these children. Once these initial impressions were formed, Rist felt that they served as a basis for the teacher's differential treatment of the children, which then resulted in their differing level of achievement.

Seaver (1973) investigated teacher's expectations in relation to teacher contact with an older sibling. Seventy-nine pairs of siblings were observed, some having the same teacher (thus, the source of the prior expectation) and the others not having the same teacher. Seaver concluded that the younger pupil's performance ". . . was affected in the predicted direction by teacher expectancies arising from prior experience with an older sibling" (p. 399).

One team of researchers (Brophy & Good, 1972; Good & Brophy, 1973) were able to clarify some of the reasons for the differing results of these studies by differentiating the types of expectancies the experimenters assessed in their studies. When the experimenter manipulated or induced the teacher expectancies, the results did not always show the effect of increased or decreased student achievement (although some manipulative studies did). However, when the study involved naturally formed expectancies, the results almost always showed the effect. Good and Brophy (1973) explain that the failure to show the effect in manipulative studies does not prove that the effect does not exist, simply that the experimenter failed to induce the proper expectations. The subject ("teacher") may simply not have accepted the image of the student that the experimenter wanted.

How the Self-fulfilling Prophecy Operates

A number of researchers have presented models in an attempt to explain the operation of the self-fulfilling prophecy (Braun, 1976; Brophy & Good, 1970; Cooper, 1979; Darley & Fazio, 1980; Rosenthal, 1974; Stayrook, Corno, & Winnie, 1978). The model that appears most suitable to use for guidance in the present study is that of Cooper (1979). The Cooper model was chosen because it not only delineates the sources of teacher expectations and the transmission of these expectations to students, but goes on to propose an explanation of the subsequent effect on students and in what behavioral terms (for the students) this effect may be manifested.

Cooper (1979) expresses the operation of the self-fulfilling prophecy as follows:

-Teachers form differential expectations for student performance.

-Expectations and context characteristics influence teacher perceptions of control over student performance.

-Teachers' perceptions of personal control influence classroom climate and choice of feedback contingencies.

-Feedback and climate influence the rate of student interaction initiation.

-Feedback contingencies influence student perception of effort-outcome covariation.

-Effort-outcome covariation beliefs influence student performance. (For an extensive review of the literature which directly supports this model, the reader is referred to the original article [Cooper, 1979].

Insert Figure 1 about here

Other relevant articles which pertain to the present study will be reviewed here).

It may be necessary here to elaborate upon some stages of the model whose meaning may not be immediately obvious. First, Cooper feels that the operations of the self-fulfilling prophecy begins with the teacher forming differentiated expectations for student performance. Past research has shown that past performance (Cooper, Lowe, & Baron, 1976); SES (Rist, 1970), physical attractiveness (Adams & Crane, 1980; Dion & Berscheid, 1975), and prior teacher experience with an older sibling (Seaver, 1973) all contribute to differential expectancy formation in teachers.

Second, Cooper views teacher control over an exchange with students as varying along three dimensions: context, timing, and duration. Cooper, Burger, and Seymour (1979) found that teachers perceived greater control over exchanges with high ability students as compared to low ability students, and more control over private as opposed to public exchanges. Cooper (1979) goes on to state that the greater the control the teacher has, the greater the likelihood that the interaction will end positively. For these reasons, Cooper concludes: "The particular implications of this reasoning and evidence seems clear: Slow student initiations, especially in public, have relatively poor teacher control implications and, therefore, low-success likelihoods" (p. 399; italics in the original).

Since the teacher's perception of control varies with the context, Cooper feels that these differing perceptions will cause teachers to choose different feedback and climate modes for high and low students, in an attempt to attain the maximun level of control that is possible. Teachers may do this by seeking to interact more with slower students in private rather than public contexts. A number of previous studies serve as validation that teachers do, in fact, emit different behaviors in interacting with high achievers than when interacting with low achievers.

Third, the idea of differential feedback was validated by Brophy and Good (1970) and Chaikin, Sigler, and Derlega (1974). Brophy and Good found that high achievers were given more frequent opportunities to answer open-ended questions and received more praise and support than low achievers. Low achievers received more criticism from teachers. In addition, Chaikin, Sigler, & Derlega (1974) found in an investiagtion of teacher nonverbal behavior that high achievers received more forward

leans, eye gazes and up-and-down head nods, all signs of approval.

Fourth, the variable of "climate" that Cooper proposes appears somewhat ambiguous. Rosenthal (1974) felt climate involved warmth, attention, and emotional support; and that a warm climate was positive, accepting, friendly and supportive. Rubovits and Maehr (1973) included attention, encouragement, praise and criticism as aspects of the climate. The present study will attempt to clarify this issue of "climate" through children's open-ended responses to questions about how they perceive teachers treating them.

Due to differential interactions with (or treatment from) the teacher, Cooper believes that the student's perception of effort-outcome covariation changes. If a student believes that effort and outcome bear no positive relationship, Cooper feels that this will result in less effort and lower student performance. In an attempt to help validate this point, the present study will analyze student self-reports of effort in school-related tasks. Cooper cites evidence of this in the areas of achievement motivation and attribution theory. Kukla (1972) found that students high in achievement motivation believed that their degree of effort and resulting performance covaried. Students low in achievement motivation perceived less effort-outcome covariation, that no matter how hard they tried, their effort was not as likely to influence performance.

Foci of Present Study

The variables of climate and feedback mentioned by Cooper (1979) appear to be important for the operation of the self-fulfilling prophecy. In addition, Rosenthal has suggested that four factors must be assessed: classroom climate, feedback to the child, teacher input,

and opportunity for student output (Rosenthal, 1974). The present study will utilize Rosenthal's original categorization to guide item construction and provide a test for student's perception of differential treatment in the classroom.

Student's accuracy in perceiving what their teachers expect of them will also be evaluated. It appears to us that if students are not successful in perceiving teacher expectations, the remainder of the model would be irrelevant. It is very unlikely that a student would exhibit decreased performance if he/she felt the teacher held very high expectations of him/her.

To evaluate Cooper's hypothesized importance of the student's perception of effort-outcome covariation, student self-reports of effort will be examined. If students believe effort will not ensure, or even aid school achievement, it seems reasonable to assume that the student will expend less effort. Questionnaire items were designed in this study to test this. It also seems logical to assume that students who do not value effort would begin to place less importance on school success and elevate the importance of nonschool success. Questions were also included about this.

Finally, as stated above, the present study will attempt to add clarity to the factor of "climate" by obtaining children's open-ended responses to questions relating to this issue.

Hypotheses

1. High achievers will perceive a warmer, more positive climate (Question 9), more positive feedback (Question 14), greater teacher input (Question 11) and greater opportunity for

Closed-ended responses were obtained from the children on the majority of the questions. They used a five-point scale, with the points on the scale having the following values: 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Usually; 5 = Always. These values were visually represented by boxes that increased in size as the value on the rating scale increased. This was done to make the scale less abstract due to the age of the subjects.

In addition to the items which utilized the above rating scale, some items which allowed for open-ended responses were included. The purpose of these were to help provide clarification in previously ambiguous areas of research.

Teacher Rating Forms

In addition to the information obtained from the students, the teachers were asked to rate the children in their class (using the same five-point scale) on their perception of the student's effort and ability. They were asked to identify the children by their birthday and sex so that no names would have to be used. This teacher information was later matched with the birthday and sex information obtained from the students.

Procedure

The questionnaire was administered in the regular classroom groups. Teachers were not present at the time of administration (this was done in hopes of allowing the children to respond more freely).

Students were told that the purpose of the questionnaire was to find out how students feel about things that happen in school. They were assured that there were no right or wrong answers, that they would not be graded, and that their questionaire would be completely anonymous.

Next, the utilization of the five-point rating scale was explained and illustrated with a sample question to give the children experience using the scale. Students were instructed to circle the box that was appropriate for them. Large posters containing the same information as the cover sheet of the questionnaire (brief instructions, rating scale with the appropriate labels at each point and the sample question) were placed in the front of the room for the children to refer to, to remember the meaning of the values (and boxes) along the scale.

Then, the questionnaire was administered, with one experimenter reading the questions aloud and the other two being available to answer individual questions.

Results

Differences due to sex and grade were not significant, therefore allowing data to be collapsed along these dimensions.

In order to test the major hypotheses of this study, teacher ratings were used to divide students into low and high expectancy groups. Teacher ratings of 4 or 5 (n = 47) were called "high" groups and teacher ratings of 1, 2, and 3 (n = 33) were called "low" groups.

Hypothesis 1

As is apparent from Table 1, this hypothesis was not confirmed.

Insert Table 1 about here

Differences between the high and low groups were not significant on any of the questions designed to assess student perceptions of differential treatment (Questions 9, 11, 14, 15, and 16).

Hypothesis 2

Results indicate that students did accurately perceive their teacher's expectations of them. Question 17 (My teacher thinks I'm smart) correlated well with the teacher's ability rating (r = 0.5127), and differences between the groups were significantly different (t = -2.10, p = .0185).

As an additional check, a difference score for the teacher rating and student perception of that rating was created (teacher ability rating -- Question 17). Table 2 shows that 87.5% of the students were completely accurate, or off by only one point. It is interesting to note, though, that more students underestimated than over-estimated relative to the teacher ratings. Thus, in general students may not realize how positively that are viewed.

Insert Table 2 about here

Hypothesis 3

This hypothesis was not supported (see Table 1). None of the predicted differences for Questions 10, 13, 18, 20, and 22a were significant.

"Climate"

Question 9 (a. My teacher makes me feel good about the work I do in school; b. How?) was designed to assess whether or not students perceived any differences in the climate their teachers provided for them. As stated above, the literature suggests (Rosenthal, 1974; Rubovits and Maehr, 1973) that "climate" involves warmth, attention, and emotional support, encouragement, praise criticism and ignoring; and that a warm climate was friendly, positive, accepting, and supportive. Using these caregorizaties for guidance, along with additions necessary

to accomadate specific student responses, the coding scheme in Table 3 evolved. Inter-coder agreement was 91%.

Insert Table 3 about here

Table 3 gives the results of these open-ended responses. Although the overall differences between highs and lows were not significant, many of the individual categories are interesting in and of themselves. The most frequent response involved positive verbal reinforcement (n = 21). Other frequent responses were providing attention/helping student (n = 13); making work interesting (n = 9); explaining what to do (n = 9); and encouragement to continue good performance (n = 6). All other responses occurred with a frequency less than 4. The responses that did occur most frequently seem to support, at least in part, the findings of Rosenthal (1974) and Rubovits and Maehr (1973) mentioned above. Apparently positive feedback, attention and helping <u>are</u> important to students.

For additional information as to what factors may be related to the "climate" factor, see Table 4. This table reveals correlation coeffeicients of selected items with Question 9b.

Insert Table 4 about here

<u>Other Open-Ended Data</u>

In addition to the open-ended responses discussed thus far, the children in our study were also asked to tell us why they did or did not get to choose to do special things in class (Question 16b) and which of their school experiences was seen as being the most useful to them and

why (Question 22b). Since others have suggested that students who are seen as brighter by the teacher are given more choice about their activities, it was assumed that the high expectancy group would report being able to do more. As shown in Table 5, there were no overall differences in the students' beliefs about why they were or were not allowed to choose to do things, although there was a nonsignificant trend for the high expectancy group to report more positive opportunities.

Insert Tables 5 and 6 about here

When asked which experiences in school were most helpful, most of the children responded by naming one or more specific school subjects. Other responses included interacting with the teacher, mention of some specific classroom procedure, or things which would prepare them for adult life. Interestingly enough, subjects that children usually like the least were the ones designated as being the most useful (e.g., Math and English).

Interrelationships of Variables

Finally, in order to look more carefully at the interrelationships of the various items relating to differential treatment of students by teachers, a factor analysis of these items was done. Results are shown in Table 7. As can be seen there, a climate factor emerged which contained items about the teacher making the student feel good, giving help when needed, giving praise, and calling on the student (see Factor 1). However, contrary to the hypothesized relationships of many researchers, classroom climate, teacher input, feedback, and opportunity

for student output did not emerge as separate factors and instead were all found on Factor 1. But, student perceptions of teacher expectancies did not load on this factor. Feeling successful in school, wanting to be successful outside of school, and believing the teacher felt the student was bright all loaded together, an apparent self-confidence factor. Factor 3 appeared to represent the "teacher's pet" phenomen with working hard on schoolwork, getting called on, and getting to do special things all loading on this factor. Factor 4 included items on wanting to be be successful as did Factor 5. Factor 6 appeared to pick up the children who were most active in class by asking questions, getting called on and getting scolded. Overall, these analyses suggest that climate may not be as important in the communication of teacher expectancies as has been assumed.

Insert Table 7 about here

Discussion

As stated above, the hypothesis of differential treatment was not supported by this study. Keeping in mind that this finding is in contrast to much of the literature, alternative explanations must be offered.

Smith and Luginbuhl (1976) attempted to probe further into the area of teacher expectations. In a laboratory study, they made one group of "teachers" aware of the natural tendency to treat high and low ability students differently. No mention of this tendency was made to the control group. Smith and Luginbuhl conclude that, "Comparisons of aware and unaware teachers in interaction with dull and bright students indicated that appropriate training can effectively reduce the potentially negative effects of teacher expectancy on evaluative feedback" (p. 271). It seems very likely to us that since the original publication of Pygmalion in 1968, teacher-training institutions have been making their student's aware of this negative possibility.

Another possibility for the lack of results which confirm previous work is the fact that this study assesses student perceptions. Much of the previous research which found evidence of differential treatment used observation of the teacher's behavior as their method of data collection. Since we are dealing here with the student's perceptions, at least two alternative explanations result: (1) differences in the teacher's behavior while interacting with highs and lows are so subtle, that the children are unaware or (2) children are reluctant to report these differences. This second alternative is especially likely, since one of the experimenters was formerly a teacher in that school district, and students may not have wanted to make too many negative statements about their teachers.

Students also did not report significant differences on questions which dealt with effort or importance of school success. It is likely that social desirability is operating here also.

Implications

Results here indicate that a much more subtle methodology may be required to assess what students perceive, how they interpret it, and how these perceptions effect subsequent behavior.

Small group interviews with students in situations removed from the school setting may be needed. Then, hopefully, children will more freely tell us their perceptions of how teacher expectations are mediated, how children interpret these expectations, and what the final effect is on children's behavior.

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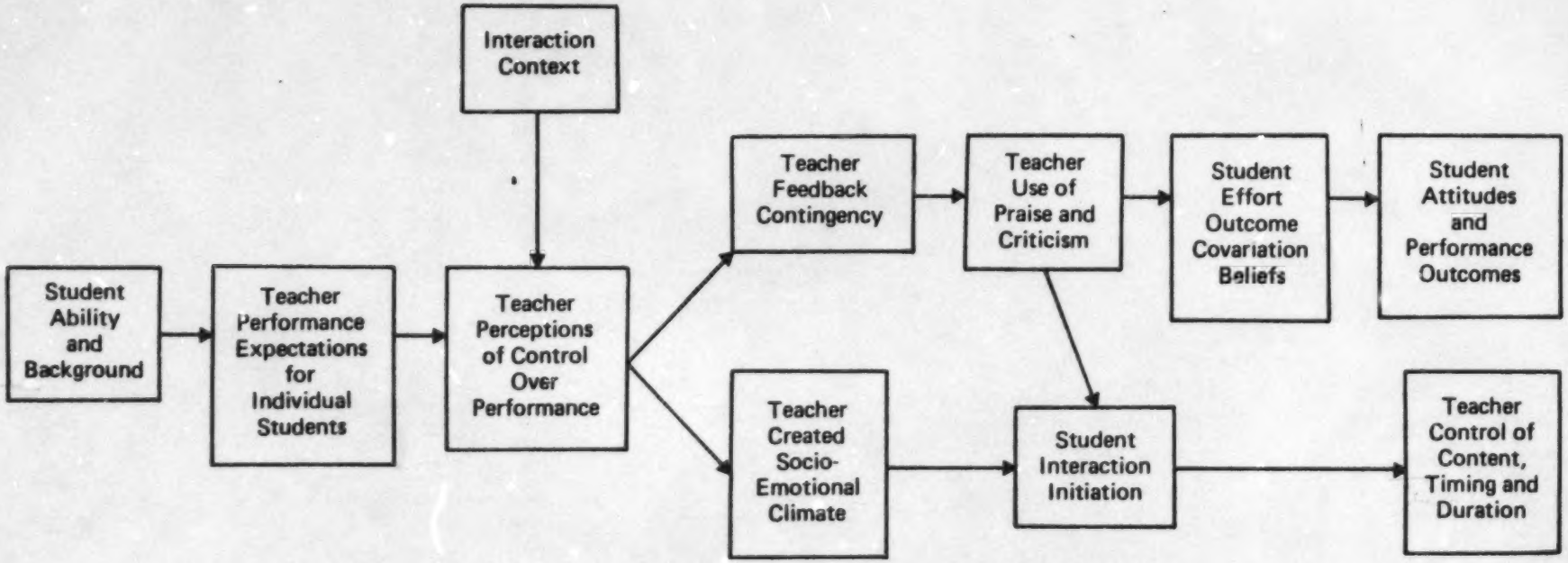
Figure 1. A model for expectation communication and behavior influence.


Interaction Context
Student Ability and Background
Teacher Performance Expectations for Individual Students
Teacher Perceptions of Control Over Performance
Teacher Feedback Contingency
Teacher Use of Praise and Criticism
Student Effort Outcome Covariation Beliefs
Student Attitudes and Performance Outcomes
Teacher Created Socio-Emotional Climate
Student Interaction Initiation
Teacher Control of Content, Timing and Duration

From Harris M. Cooper. Pygmalion grows up: A model for teacher expectation communication and performance influence. Review of Educational Research, 1979, 49, 389-410.

Table 1

	Item and Number	$\bar{X}$ High (n = 47)	$\bar{X}$ Low (n = 33)	t	1-Tailed Probability
9a.	My teacher makes me feel good about the work I do in school.	3.7234	3.6061	-0.47	.318
10.	I ask questions when I don't understand.	4.0426	3.8182	-0.96	.1705
11.	When I need help, my teacher comes right away.	3.7021	3.8788	0.84	.2025
12.	I get scolded by the teacher for not paying attention.	2.4255	2.4545	0.11	.456
13.	I spend a lot of time on school work when I'm not in school.	2.9149	2.6667	-0.92	.181
14.	I get praised for trying hard.	3.2979	3.1212	-0.72	.242
15.	I get called on to answer questions in class.	3.2979	3.0909	-1.09	.1395
16a.	I get to choose special things to do in class.	2.2979	2.2121	-0.47	.3215
17.	My teacher thinks I'm smart.	3.5745	3.2121	-2.10	.0195
18.	It's important to me to do well in school.	4.8511	4.6970	-1.46	.0745
20.	It is important to me to be successful in other things besides school.	4.1489	4.0303	-0.51	.3050
22a.	I learn things in school that will help me when I am an adult.	4.4255	4.4545	0.18	.4290

Table 2

Ability Difference Variable

Difference (Teacher Rating - Question 17)	Frequency	Percent
Minus 2	6	7.5
Minus 1	14	17.5
Same	24	30.0
Plus 1	32	40.0
Plus 2	6	5.0

Table 3

Student Responses to How Teachers Make Them Feel Good About Their Work

Code	Meaning	Frequencies High	Low
00	No response	0	0
10	Positive Responses		
11	Encouragement to continue good performance.	4	2
12	Positive verbal reinforcement (one-on-one).	12	9
13	Public praise: Telling other students how well individual did.	3	0
14	Emotional warmth/support. Talking about problems other than schoolwork.	2	1
15	Providing attention/helping student.	5	8
16	Explaining what to do.	7	2
17	Concrete rewards.	1	0
18	Making work interesting/fun/games.	7	2
19	Listening to me.	1	0
20	Neutral Responses		
27	Grading/evaluation.	0	1
30	Negative Responses		
31	Lack of encouragement or positive comments.	1	3
32	Criticism or verbal punishment.	0	1
35	Lack of attention/helping.	0	1
36	Not explaining what to do	2	0
99	Uncodeable	2	2

Table 4

Item Number and Question	r	Probability	Percent of Common Variance
3. I feel that I am successful in school.	0.2010	.037	.04
11. When I need help, my teacher comes right away.	0.3405	.001	.12
13. I spend a lot of time on school work when I'm not in school.	0.2160	.027	.05
14. I get praised for trying hard.	0.4839	.000	.23
15. I get called on to answer questions in class.	0.2990	.004	.09
17. My teacher thinks I'm smart.	0.2107	.030	.04

Table 5

16b. Why I get to choose special things...

Code		Frequencies High	Low
10	Positive		
11	Work completed	3	1
12	Reward for good performance in school	4	1
13	Reward for good behavior	2	1
14	Student requests -- student initiates	4	2
15	Teacher chooses	3	1
19	Everyone gets to	0	1
20	Neutral		
22	Sometimes good work -- sometimes not	1	0
23	"Sometimes I'm good, but sometimes I'm not"	0	2
25	No special reason to be chosen	2	1
29	Teacher has something else planned	5	0
30	Negative		
31	Work not completed	1	1
32	Student does not do good work (school related)	2	1
33	Inappropriate behavior	2	5
34	Student doesn't request	3	1
35	Teacher chooses others	8	7
39	No one gets to -- not done in that classroom	6	5
99	Uncodable	1	3

Table 6

22b. Things which help me the most are ...
(first responses)

Code		Frequencies High	Low
01	Courses in general		
10	Humanities		
11	English	5	4
12	Spelling	2	3
13	Reading	3	1
20	Social Sciences		
21	Social Studies	7	0
26	History	0	1
30	Natural Sciences		
31	Science	1	0
40	Physical Sciences		
41	Math	16	14
50	Classroom Related Factors		
51	Interaction with teachers	6	5
52	Specific classroom procedure	4	1
70	General adult life		
71	Learning things which prepare me for adult life	1	3
73	Comprehension of basic concepts (as opposed to details)	1	0
74	Interaction with other people	1	1
99	Uncodable	0	1

Table 7

Factor Analysis of Climate and Student Perception Variables

Item		Factors 1	2	3	4	5	6
3.	Feel successful in school	---	.80	---	.65	---	---
8.	Do well in school	---	---	---	---	.72	---
9a.	Teacher makes me feel good	.65	---	---	---	---	---
10.	Ask questions	---	---	---	---	---	.59
11.	Need help... teacher comes	.55	---	---	---	---	---
12.	Get scolded	---	---	---	---	---	.48
13.	Spend time on school work	---	---	.68	---	---	---
14.	Get praised	.73	---	---	---	---	---
15.	Get called on	.31	---	.34	---	---	.32
16.	Get to choose special things	---	---	.49	---	---	---
17.	Teacher thinks I'm smart	---	.56	---	---	---	---
18.	Important to do well in school	---	---	---	.34	---	---
20.	Non-school success	---	.42	---	---	.31	---
22a.	Learn things in school that will help as an adult	---	---	---	.45	---	---

Minimum eigenvalue = 1.0. Six factors account for 68% variance; minimum loading = .35.